

# HYDRODYNAMICS CONTROL METHOD AND APPARATUS

## WHAT I CLAIM IS:

1. A method for establishing a plug flow through a process vessel comprising an enclosed cylindrical container, an inlet conduit, an outlet conduit and a permeable barrier placed in the flow path of fluid that is passing through said container, said permeable barrier constructed in a manner that will permit adjustment of the permeability to compensate for variations in the feed rate, density and viscosity of the said fluid.
2. The method of claim 1 whereby said permeable barrier is of louvered shutter construction with the louvers being adjustable from wide open to closed.
3. The method of claim 1 whereby the permeability of said permeable barrier can be discretely regulated at various areas on said barrier.
4. The method of claim 2 and including a mechanism on the exterior of said vessel connected to said permeable barrier in a manner that will permit manipulation of the louvers.
5. An apparatus for establishing a plug flow of fluid passing through a process vessel consisting of a permeable barrier placed within said vessel in the flow path of said fluid and including a means for adjusting the permeability of the said barrier.
6. An apparatus of claim 5 including a louvered shutter type construction of the permeable barrier with a means for discrete adjustment of the permeability of various areas of said barrier.
7. An apparatus of claim 6 including an external means on said vessel connected to said louvered shutter type permeable barrier in such a manner as to permit discrete adjustment of the louvers from wide open to closed.